PROPOSED AMENDMENTS TO THE CLAIMS

All claims that will be pending and under consideration in the present application upon entry of the proposed amendments are shown below. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A computer-implemented method for displaying a warning that a clinical agent received from a clinician should not be administered to a person, comprising the steps of:

initially receiving from a clinician clinical agent information, the clinical agent information including an identifier of a specific clinical agent and a dosage of the specific clinical agent, wherein receiving ~~includes~~ comprises:

(a) receiving a selection of an entry in a listing of clinical agents on a graphical user interface; and

(b) receiving a selection of the dosage from a range of dosages recommended for the clinical agent associated with the selected entry;

identifying each of the genes associated with the clinical agent by comparing the identifier of the clinical agent received from the clinician to a first data set containing agent-gene associations, wherein the associated genes are likely to interact with the clinical agent to result in an atypical clinical event;

when a gene is associated with the clinical agent, automatically obtaining a genetic test result value for the associated gene of a person, wherein automatically obtaining comprises:

(a) receiving identification of the person to whom the clinical agent is to be administered and receiving proper authorization to access an electronic medical record (EMR) of the person; and

(b) utilizing the identification and the proper authorization from the clinician to access patient information within the EMR of the person stored within a comprehensive healthcare system;

when the patient information comprises the genetic test result value for the associated gene of a person, comparing the genetic test result value to the second data set containing one or more polymorphism values associated with one or more atypical clinical events for the clinical agent;

otherwise, performing the following procedure:

(a) determining whether to seek a clinician's authorization to order a test of the person or whether to order the test without the clinician's input based on both a likelihood of one or more genetic variations of the associated gene occurring and a severity of interaction of the one or more occurring genetic variations with the clinical agent;

(b) when the severity and the likelihood of the associated gene's one or more genetic variations indicate ordering the test without the clinician's input, automatically ordering the test to determine the genetic test result value for the associated gene of the person when the test is available;

(c) when the severity and the likelihood of the associated gene's one or more genetic variations indicate seeking the clinician's

authorization to order the test, seeking a clinician's authorization for ~~a~~ the test by presenting a genetic test ordering window; and

~~(b)~~ (d) automatically ordering the test to determine the genetic test result value for the associated gene of ~~a~~ the person when the test is available and the authorization is granted by a clinician at the genetic test ordering window;

determining whether the genetic test result value correlates to one or more of the one or more polymorphism values contained in the second data set; and

when the genetic test result value correlates to one or more of the one or more polymorphism values, displaying a warning to the clinician that the clinical agent received from the clinician should not be administered, and recording an indication of the warning in the EMR of the person.

2. (Cancelled).

3. (Original) The method of claim 1, wherein the clinical agent information is received over a communication network from a remote computer.

4. (Cancelled).

5. (Currently Amended) The method of claim [[4]]1, wherein the gene has one or more variants associated with an atypical response to the identified clinical agent.

6. (Currently Amended) The method of claim [[4]]5, further comprising the step of initiating a clinical action ~~if~~ when ~~a~~ the gene has at least one variant associated with an atypical response to the identified clinical agent.

7. – 10. (Cancelled).

11. (Currently Amended) The method of claim 1, wherein the first data set of agent-gene associations is updateable ~~may be updated~~.

12. (Currently Amended) The method of claim 1, wherein the second data set includes information ~~about~~ pertaining to risks associated with the atypical clinical event.

13. (Currently Amended) The method of claim 12, ~~wherein~~ further comprising the step of ~~outputting information includes~~ accessing the risk information in the second data set.

14. (Previously Presented) The method of claim 1, wherein the first data set and the second data set are incorporated into a single data set.

15. (Cancelled).

16. (Previously Presented) The method of claim 1, wherein the clinical agent information includes a dosage of the identified clinical agent, and wherein the second data set includes information about risks associated with various dosages of the identified clinical agent.

17. (Withdrawn) The method of claim 1, further comprising the step of outputting information that the person is not at risk if the genetic test result value does not correlate to a polymorphism value.

18. (Currently Amended) A computer system for displaying a warning that a clinical agent received from a clinician should not be administered to a person, comprising;

a receiving component that receives from a clinician clinical agent information, the clinical agent information including an identifier of a specific clinical agent and a dosage of the specific clinical agent;

a first determining component that determines whether a gene is associated with the clinical agent by comparing the identifier of the clinical agent received from the clinician to the first data set containing agent-gene associations, when the clinical agent is not associated with a gene from the first data set, the first determining component approves administration of the clinical agent;

an obtaining component for obtaining a genetic test result value for the associated gene of a person when a gene is associated with the clinical agent;

a comparing component for comparing the genetic test result value to a second data set containing one or more polymorphism values associated with one or more atypical clinical events for the clinical agent at the dosage received;

a second determining component that determines whether the genetic test result value correlates to one or more of the one or more polymorphism values contained in the second data set;

a third determining component that performs a procedure comprising:

(a) incident to determining that the genetic test result value correlates to one or more of the one or more polymorphism values, accessing the second data set; and

(b) utilizing the second data set to determine whether a risk of damage from not administering the clinical agent is greater than the risk of damage by lowering the dosage of the clinical agent, ~~and~~

~~(c) indicating a lower dosage of the clinical agent be prescribed when the risk of damage is less than not administering the clinical agent; and~~

a displaying component that performs a procedure comprising:

(a) receiving the determination from the third determining component of whether the risk of damage from not administering the clinical agent is greater than the risk of damage by lowering the dosage of the clinical agent;

(b) displaying in a notification window a value of a lower dosage of the clinical agent to be prescribed when the risk of damage is less than not administering the clinical agent;

~~an indication from the third determining component that the risk of damage of not administering the clinical agent is less than lowering the dosage of the clinical agent; and~~

~~(b)~~ (c) displaying in ~~a~~ the notification window a warning to the clinician that the clinical agent should not be administered to the person when the risk of damage of not administering the clinical agent is less than lowering the dosage of the clinical agent,

wherein the notification window surfaces a selectable area for accessing information regarding the one or more of the polymorphism values, and wherein the notification window displays an alternative clinical agent that does not correlate with the genetic test result value.

19. (Cancelled).

20. (Original) The computer system of claim 18, wherein the clinical agent information is received over a communication network from a remote computer.

21. (Previously Presented) The computer system of claim 18, wherein the first determining component includes a querying component that queries the first data set containing agent-gene associations, and wherein the system further comprises a third determining component that determines if a gene has one or more variants associated with an atypical response to the identified clinical agent.

22. (Previously Presented) The computer system of claim 21, wherein the gene has one or more variants associated with an atypical response to the identified clinical agent.

23 (Original) The computer system of claim 21, further comprising an initiating component that initiates a clinical action if a gene has at least one variant associated with an atypical response to the identified clinical agent.

24. (Cancelled).

25. (Withdrawn) The computer system of claim 23, wherein the clinical action is ordering a genetic test for the person.

26. (Withdrawn) The computer system of claim 23, wherein the clinical action is canceling another clinical action.

27. (Previously Presented) The computer system of claim 18, wherein the obtaining component is configured to obtain the genetic test result value from an electronic medical record of the person stored within a comprehensive healthcare system.

28. (Previously Presented) The computer system of claim 18, wherein the first data set of agent-gene associations may be updated.

29. (Previously Presented) The computer system of claim 18, wherein the second data set includes information about risks associated with the atypical clinical event.

30. (Previously Presented) The computer system of claim 29, wherein the outputting component includes an accessing component that accesses the risk information in the second data set.

31. (Previously Presented) The computer system of claim 18, wherein the first data set and the second data set are incorporated into a single data set.

32. (Cancelled).

33. (Previously Presented) The computer system of claim 18, wherein the clinical agent information includes a dosage of the identified clinical agent, and wherein the second data set includes information about risks associated with various dosages of the identified clinical agent.

34. (Withdrawn) The computer system of claim 18, further comprising a second outputting component that outputs information that the person is not at risk if the genetic test result value does not correlate to a polymorphism value.

35. – 51. (Cancelled).

52. (New) The method of claim 1, wherein seeking a clinician's authorization for the test by presenting a genetic test ordering window further comprises displaying a graphical user interface (GUI) on a display device, wherein the GUI is configured to solicit input from a clinician to ascertain whether to authorize performing the test on the person, wherein the GUI displays fields that reveal an identification of the person and an identification of the test to be performed, and wherein the GUI is configured to receive approval from the clinician to carry out the test.

53. (New) The method of claim 1, further comprising:

performing the test on the person upon receiving approval from the clinician to carry out the test; and

outputting a result value of the test and a list of risk-associated agents related to the test result value, wherein outputting comprises:

(a) showing to the clinician a notification window within a graphical user interface (GUI) that displays the list of risk-associated agents;

(b) presenting within the notification window alternate clinical agents that are not related to the test result value; and

(c) presenting within the notification window a button that, when selected, directs the clinician to additional information regarding a genetic mutation linked to the test result value.

54. (New) The method of claim 53, further comprising determining if the person has been exposed to an agent on the list of risk-associated agents.

55. (New) The method of claim 54, wherein the step of determining if the person has been exposed includes accessing the EMR of the person.

56. (New) The method of claim 54, further comprising initiating a clinical action when the person has been exposed to an agent on the list of risk-associated agents, wherein the clinical action comprises:

automatically canceling previously ordered clinical actions for the person that are associated the list of risk-associated agents;

automatically recommending alternate clinical actions based on querying the test result value against a computerized table; and

upon approval from the clinician, automatically ordering one or more of the alternate clinical actions.

57. (New) The method of claim 56, wherein the one or more alternate clinical actions include generating an electronic message that instructs ceasing administering at least one agent presently administered to the person.

58. (New) A computer system for processing hereditary data related to the use of clinical agents by a person, comprising:

a displaying component for displaying a graphical user interface (GUI) that is configured to solicit input from a clinician to ascertain whether to authorize performing a genetic test on a patient;

a receiving component that, upon determining that a gene is associated with a clinical agent, performs a process for automatically obtaining a genetic test result value for the associated gene of the patient comprising:

(a) receiving from the displaying component identification of the patient to whom the clinical agent is to be administered in order to access an electronic medical record (EMR) of the patient; and

(b) utilizing the identification and the proper authorization from the clinician to access patient information within the EMR of the patient;

the receiving component that, upon determining that the genetic test result value for the patient is not available in the EMR, performs a process for obtaining a genetic test result value for the associated gene of the patient comprising:

(a) determining whether to request authorization from a clinician to carry out the genetic test based on three criteria, a cost of the genetic test, whether the genetic test is available, and a likelihood of a genetic variation based on demographic information of the patient;

(b) when the three criteria indicate authorization is needed, seeking the clinician's authorization for the genetic test by displaying a genetic test ordering window at the GUI; and

(c) when the three criteria indicate no authorization is needed, automatically ordering the genetic test to determine the genetic test result value for the associated gene of the patient;

a querying component for querying a computerized table listing polymorphism values and atypical clinical events associated with the polymorphism values;

a first determining component that determines if the genetic test result value is a polymorphism value associated with an atypical clinical event;

an accessing component that accesses a list of risk-associated agents if the determining component determines that a genetic test result value is polymorphism value associated with an atypical event; and

an outputting component that outputs an interpretation of the genetic test result value and the list of risk-associated agents.

59. (New) The computer system of claim 58, further comprising a second determining component that determines if the person has been exposed to an agent on the list of risk-associated agents.

60. (New) The computer system of claim 59, wherein the second determining component determines if the person has been exposed includes an accessing component that accesses an electronic medical record of the person.

61. (New) The computer system of claim 58, wherein the electronic medical record is stored within a comprehensive healthcare system.

62. (New) The computer system of claim 58, further comprising an initiating component that initiates a clinical action if the person has been exposed to an agent on the list of risk-associated agents.

63. (New) The computer system of claim 62, wherein the clinical action is generating an electronic message to inform a clinician to no longer administer the agent.